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being successively and alternatively engaged with said identical double gears arranged on said first axis,

wherein the arrangement of the at least four identical double gears extends in said space along the circumferential direction by an amount equivalent to only two of the identical double gears.

13. (New) The reduction gear mechanism of a camera zoom lens barrel according to claim 12, wherein the length of the at least four identical double gears along the optical axis direction in said space is accommodated by the length of the bi-directional motor in the optical axis direction.

REMARKS

By virtue of the above amendment, claims 1, 7, 8, and 9 have been amended, claim 5 has been cancelled, and claims 10-13 have been added (added claims 10 and 12 being independent claims). Accordingly, claims 1-12 are pending and under consideration, claims 1, 8, 10, and 12 being independent claims.

In view of the above-mentioned amendment to the claims, it is submitted that the Examiner's rejections under 35 U.S.C. §§ 112, 102, and 103 have been overcome. As herein amended, it is submitted that pending claims 1-12 in the present application are now both allowable and in condition for allowance, and an action to such effect is earnestly requested at the Examiner's earliest convenience.

Matters for the Examiner's Attention

A Supplemental Information Disclosure Statement is filed concurrently herewith in an effort to provide the Examiner with documents cited by other Examiners in related applications. Related applications are identified in the Supplemental Information Disclosure Statement filed herewith, or were identified in the earlier March 8, 2002 Information

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Disclosure Statement.

The Examiner is requested to review the status of related cases when acting upon Applicants' reply, including those applications from which Applicants have provided the cited art (as well as those for which Applicants have not yet received a first Official Action, i.e., U.S. Patent Application Nos. 09/961,233; 10/101,150; 10/101,062; 10/101,149; and 10/101,618).

Explanation of Reason for Claim Amendments

The reason for the present amendment to claims 1 and 8 is to emphasize the subject matter relating to former claim 5 therein. The reason for the present amendment to claim 6 is to correct antecedent basis in claim 7, and the reason for the present amendment to claim 9 is to correct spelling errors.

Accordingly, Applicants submit that no subject matter has been disclaimed. Similarly, Applicants do not intend to surrender any equivalents by clarification of the terms of claims 1, 7, 8, or 9.

Rejections under 35 U.S.C. § 112

With respect to the rejection of claims 5 and 7 under 35 U.S.C. § 112, second paragraph, claim 5 has been cancelled, and claim 6 has been amended to correct antecedent basis in claim 7. Applicants respectfully request the withdrawal of this rejection.

Rejections under 35 U.S.C. §§ 102 and 103

The Examiner rejected claims 1, 5, and 6 under 35 U.S.C. § 102(b), as being anticipated by SATO et al. ("SATO", U.S. Patent No. 5,701,208); claims 8 and 9 under 35 U.S.C. § 102(b), as being anticipated by EDWARDS (U.S. Patent No. 4,662,241). Claim 5 has been cancelled.

Applicants submit that the Examiner's rejection of these claims should be withdrawn,

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for the following reasons.

None of the applied references teaches or suggests the combined limitations of claims 1 or 8, including, but not limited, to "wherein all of said gears supported by the first and second axes are identical to each other".

SATO et al. discloses a clutch mechanism having a first gear 44 (with clutch engaging portions 46) and a second gear 42 (with clutch engaging portions 47). The first gear engages the drive train G, and the second gear engages a five-gear pinion 20. The clutch mechanism is not a reduction gear mechanism, but prevents undesired forces on/from the pinion 20 (i.e., from external force on the lens barrel) from affecting the gear train G. None of the gears are "identical to each other". Furthermore, although the Examiner has pointed to column 4, lines 31-36 of SATO et al., this portion of SATO et al. merely teaches that two gears may have "substantially identical diameters", which in no sense corresponds to the claim language. Two gears having "substantially identical diameters" are not inherently or otherwise "identical" in shape, pitch, form, width, height, material, surface properties, or any other characteristic. On the other hand, "identical" gears, as used in the invention, are interchangeable and can be used flexibly in different design variations. Where only identical gears are used, all of the gears can be randomly selected from a generic supply, reducing costs and saving time.

In relevant part, EDWARDS discloses a variety of transaxle gearboxes. In particular, in Fig. 4, a gearbox having four double gears on parallel shafts is disclosed, operating as discussed in column 6, lines 16-34. EDWARDS also lacks any teaching that gears (such as double gears 226-230; 192-196; 228-232), or a "dummy" double gear 194-198 (in which gear 198 serves no purpose; col. 5, lines 55-57) are all identical.

Accordingly, for at least the above reasons, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1 and 8 under 35 U.S.C. § 102(b) as being anticipated over one of SATO or EDWARDS.

Applicants further submit that claims 6 and 9, which depend either directly or

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indirectly from one of claims 1 or 8, are allowable over the references of record for the above reasons, and at least for the reason that each depends from an allowable base claim and because each recites additional features to further define Applicants' invention.

For example, claim 6 recites that said reduction gear mechanism is arranged in a zoom lens barrel having an optical axis direction. SATO shows a slip clutch, not a reduction gear mechanism, and the other art of record has nothing to do with a zoom lens barrel.

The Examiner rejected claims 1-4 as being unpatentable under 35 U.S.C. § 103(a), as being unpatentable over PARSONS (U.S. Patent No. 4,595,081) in view of EDWARDS.

In relevant part, PARSONS discloses a four unit reduction gear mechanism. PARSONS also fails to teach or suggest at least the limitation "wherein all of said gears supported by the first and second axes are identical to each other", at least because the double gears (including 46-47; 50-51; 48-49; and the double gear on the second shaft 56) appear very different from one another, and PARSONS does not include any disclosure suggesting that these gears are all identical. To the contrary, the third and fourth double gears in the chain must have (at least) different axial lengths in order to operate.

Accordingly, for at least the above reasons, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 1, as well as dependent claims 2-4, under 35 U.S.C. § 102(b) as being unpatentable over PARSONS in view of EDWARDS.

NEWLY SUBMITTED CLAIMS

Newly submitted claim 10 is directed to a "reduction gear mechanism for a camera zoom lens barrel having an optical axis direction" and includes subject matter similar to former claims 1 and 5 as well as features advantageous and particular to a zoom lens barrel. Newly submitted claim 11 includes subject matter similar to claim 7, but including features advantageous and particular to a zoom lens barrel.

Newly submitted independent claim and dependent claim 13, include subject matter similar to newly submitted claim 10, as well as some of the structure and advantages set forth

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in the specification, e.g., on pages 75-79 thereof.

Applicants submit that these claims are allowable for some of the same reasons given above, and additionally because these claims discuss features and advantages particular to a zoom lens barrel.

SUMMARY AND CONCLUSION

In view of the fact that none of the art of record, whether considered alone or in combination, discloses or suggests the present invention as now defined by the pending claims, and in further view of the above amendments and remarks, reconsideration of the Examiner's action and allowance of all the pending claims in the present application are respectfully requested and are believed to be appropriate.

Any amendments to the claims which have been made in this amendment should not be considered to be narrowing, and no estoppel should be deemed to attach thereto. No equivalents are considered to have been disclaimed.

If there should be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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